WHAT IS CLAIMED IS:

1. A semiconductor optical amplifier (SOA) module apparatus for amplifying an optical signal received from an input optical fiber, and transmitting the amplified optical signal to an output optical fiber, comprising:

a semiconductor optical amplifier (SOA) for amplifying an optical signal applied to its own first stage, outputting the amplified optical signal at its own second stage, and outputting an ASE (Amplified Spontaneous Emission) light at the first stage;

an input unit having a first isolator which transmits an input optical signal to the first stage of the SOA, controls the ASE light received from the first stage of the SOA to separate it from a traveling path of the input optical signal at a prescribed angle, and transmits the ASE light separated from the traveling path;

a first monitor photo-diode for receiving, and detecting a power level of, the ASE light passing through the first isolator; and

an output unit for converging the amplified optical signal received from the SOA onto one end of the output optical fiber.

2. The apparatus as set forth in claim 1, wherein the input unit includes:

a first collimating lens system for facing one end of the input optical fiber, and collimating the optical signal;

a first glass window for transmitting to the first isolator the optical signal collimated at the first collimating lens system; and

a first convergence lens system, disposed between the first isolator and the first stage of the SOA, for converging the optical signal received from the first isolator onto the first stage of the SOA, and outputting to the first isolator the ASE light emitted from the first stage of the SOA.

3. The apparatus as set forth in claim 1, further including a controller communicatively connected with the first photo diode and configured for determining a power level of the optical signal as a function of the detected power level of the ASE light.

4. The apparatus as set forth in claim 1, further comprising:

a second monitor photo-diode for detecting an uncoupled optical signal which is emitted from the output unit without being transmitted to the one end of the output optical fiber.

5. The apparatus as set forth in claim 1, wherein the output unit includes:

a second collimating lens system for collimating the amplified optical signal received from the second stage of the SOA;

a second isolator for transmitting the amplified optical signal received from the second collimating lens system, controlling a partially-uncoupled optical signal to separate it from a traveling path of the amplified optical signal at a prescribed angle, and transmitting the uncoupled optical signal separated from the traveling path;

a second convergence lens system disposed for converging the amplified optical

signal received from the second isolator onto one end of the output optical fiber; and

disposed between the second isolator and the second convergence lens system, a second glass window for transmitting the collimated amplified optical signal to the second convergence lens system.

6. The apparatus as set forth in claim 5, further comprising a second monitor photo-diode for receiving and detecting a power level of the separated partially-uncoupled optical signal.

7. The apparatus as set forth in claim 6, further including a controller communicatively connected with the second monitor photo-diode and configured for determining a power level of the amplified optical signal received from the second stage based on the detected power level of the separated partially-coupled optical signal.

8. The apparatus as set forth in claim 7, wherein the separating of the optical signal is performed by refracting the optical signal.

9. The apparatus as set forth in claim 7, wherein the controller is configured for determining, as a function of the detected power level of the ASE light, a power level of the optical signal before amplification by the SOA.

10. The apparatus as set forth in claim 1, wherein the output unit includes:

a second collimating lens system for collimating the amplified optical signal received from the second stage of the SOA;

a second convergence lens system for converging the amplified optical signal collimated by the second collimating lens system onto one end of the output optical fiber;

disposed between the second collimating lens system and the second convergence lens system, a second isolator for transmitting the amplified optical signal received from the second collimating lens system to the second convergence lens system, and cutting off optical signals received from the second convergence lens system; and

a second glass window disposed between the second isolator and the second convergence lens system, for transmitting the amplified optical signal received from the second isolator to the second convergence lens system, and reflecting a partially-uncoupled optical signal to separate it from the traveling path of the amplified optical signal at a prescribed angle.

11. The apparatus as set forth in claim 10, further comprising a second monitor photo-diode for receiving and detecting a power level of the reflected partially-uncoupled optical signal.

12. The apparatus as set forth in claim 11, further including a controller communicatively connected with the second monitor photo-diode and configured for determining a power level of the amplified optical signal received from the second stage

based on the detected power level of the reflected partially-uncoupled optical signal.

13. The apparatus as set forth in claim 12, wherein the controller is configured for determining, as a function of the detected power level of the ASE light, a power level of the optical signal before amplification by the SOA.

14. A semiconductor optical amplifier (SOA) module apparatus for amplifying an optical signal received from an input optical fiber, and transmitting the amplified optical signal to an output optical fiber, comprising:

a semiconductor optical amplifier (SOA) having a first stage and a second stage, the SOA for amplifying an optical signal applied to the first stage, outputting the amplified optical signal at the second stage, and outputting an ASE (Amplified Spontaneous Emission) light at the first stage;

an input unit which transmits an input optical signal to the first stage of the SOA and controls the ASE light received from the first stage of the SOA to separate it from a traveling path of the input optical signal at a prescribed angle, and transmits the ASE light separated from the traveling path;

a first monitor photo-diode for receiving, and detecting a power level of, the separated ASE light;

an output unit for converging the amplified optical signal received from the SOA onto one end of the output optical fiber; and

a controller in communicative connection with the first monitor photo-diode, the

output unit and the SOA and configured for regulating a level of amplification of the SOA.

15. The apparatus as set forth in claim 14, wherein the controller is configured for determining a power level of the optical signal as a function of the detected power level of the ASE light.

16. The apparatus as set forth in claim 14, further comprising:

a second monitor photo-diode for detecting an uncoupled optical signal which is emitted from the output unit without being transmitted to the one end of the output optical fiber.

17. The apparatus as set forth in claim 14, wherein the input unit includes a first isolator for transmitting the input optical signal to the first stage and wherein the output unit includes:

a second collimating lens system for collimating the amplified optical signal received from the second stage of the SOA;

a second isolator for transmitting the amplified optical signal received from the second collimating lens system, controlling a partially-uncoupled optical signal to separate it from a traveling path of the amplified optical signal at a prescribed angle, and transmitting the uncoupled optical signal separated from the traveling path;

a second convergence lens system disposed for converging the amplified optical signal received from the second isolator onto one end of the output optical fiber; and

disposed between the second isolator and the second convergence lens system, a second glass window for transmitting the collimated amplified optical signal to the second convergence lens system.

18. The apparatus as set forth in claim 17, further comprising a second monitor photo-diode for receiving and detecting a power level of the separated partially-uncoupled optical signal.

19. The apparatus as set forth in claim 18, wherein the controller is configured for determining a power level of the amplified optical signal received from the second stage based on the detected power level of the separated partially-coupled optical signal.

20. The apparatus as set forth in claim 19, wherein the separating of the optical signal is performed by refracting the optical signal.